EXHIBIT Q

Fourth Quarter 1997 Status Report
Lawry's California Center
570 West Avenue 26
Los Angeles, California

January 15, 1997- should be 1998
LARWQCB File Nos. 95-093 and 95-094
3077.00/6257.00

Prepared for
California Regional Water Quality Control Board
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, California 91754-2156

Levine·Fricke·Recon
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

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Ms. Ana Veloz
California Regional Water Quality Control Board
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, California 91754-2156

Subject: Fourth Quarter 1997 Status Report, Lawry's California Center,
570 West Avenue 26, Los Angeles, California
LARWQCB File Nos. 95-093 and 95-094

Dear Ms. Veloz:

Levine·Fricke·Recon Inc. has prepared the enclosed status report on behalf of the Lipton Company, dba Conopco, Inc. This report summarizes the status of ongoing investigative and remedial activities performed at the Lawry's California Center during the fourth quarter of 1997.

If you have any questions, please contact me at (714) 955-1390.

Sincerely,

Scott J. Ollivier, P.E.
Senior Project Chemical Engineer

Attachments

cc: Don Smith, Esq., Unilever
Bruce Smiley, Esq., Freeman, Freeman & Smiley
Mr. Bruce H. Edelson, P.E.
Mr. George Ghebranious, P.E., Caltrans

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1.0 INTRODUCTION

The Lawry's California Center consists of a 17-acre parcel of land located at 570 West Avenue 26, Los Angeles (Figures 1 and 2). Two primary areas of environmental concern have been identified at the Lawry's California Center:

(1) the former Mathews Paint Company (Mathews) site

(2) the former Chromal Plating (Chromal) site

Ongoing remedial activities at the Lawry's California Center are focused on these two areas. This quarterly status report provides an update of work performed at the Lawry's California Center in the fourth quarter of 1997.

2.0 SCOPE OF WORK

Work performed during the fourth quarter of 1997 consisted of the following:

General Lawry's California Center Site

- Prepared "Work Plan for Environmental Investigation and Remediation during the Redevelopment of the Lawry's California Center"
- Met with the Los Angeles Regional Water Quality Control Board (RWQCB) to discuss plans for redevelopment of the Lawry's California Center site and status of Mathews and Chromal sites

Mathews Site

- Continued operation of the vapor extraction system
- Obtained confirmation soil samples from five borings
- Monitored groundwater of eight wells
- Prepared a closure report requesting a "no further action" letter for the Mathews site

Chromal Site

- Prepared and submitted Site Assessment Report to the RWQCB
- Analyzed aquifer pump test data to estimate groundwater velocity beneath site
- Continued laboratory studies to evaluate potential remedial solutions for soil and groundwater at the site

3.0 GENERAL LAWRY'S CALIFORNIA CENTER SITE

3.1 Work Plan for Redevelopment Activities

A work plan was prepared to define an approach for responding to environmental issues that may arise during redevelopment of the Lawry's California Center. The work plan, entitled "Work Plan for Environmental Investigation and Remediation during the Redevelopment of the Lawry's California Center," and dated October 20, 1997, was submitted to the RWQCB in mid-December.

In a letter dated December 31, 1997, the RWQCB concurred with the work plan but requested that soil samples be analyzed for methyl tertiary butyl ether in addition to the other proposed chemicals.

3.2 Meeting with RWQCB

On December 15, 1997, LFR and Conopco representatives met with the RWQCB to discuss future plans for the Lawry's California Center site and the status of work at the Mathews and Chromal sites.

4.0 MATHEWS SITE

4.1 Vapor Extraction System Operation

Operation of the vapor extraction and hot air injection systems continued in the fourth quarter. Vapor extraction well volatile organic compound (VOC) concentrations have remained relatively steady during the quarter, with the exception of several wells that have shown decreasing concentrations. To date, a total of approximately 112,000 pounds of petroleum hydrocarbons has been removed by the vapor extraction system.

4.2 Confirmation Soil Sampling and Groundwater Monitoring

A detailed description of the confirmation soil sampling and groundwater monitoring conducted in the fourth quarter of 1997 is provided in the Site Closure Report for the Mathews Site, dated January 13, 1998. A summary of the results, conclusions, and recommendations is provided in the following sections.

4.2.1 Soil Sampling

Confirmation soil sampling was conducted on December 1, 1997. Soil samples were collected from five borings (CB-1 through CB-5, Figure 3). All five confirmation borings were drilled to a depth of 40 feet below ground surface (bgs). Soil samples were collected from each boring at 5-foot intervals. Soil samples were analyzed for total

volatile petroleum hydrocarbons (TVPH), total extractable petroleum hydrocarbons (TEPH), and VOCs.

The results of the confirmation soil sampling are shown in Table 1 and Figure 3. Generally, elevated levels of petroleum hydrocarbons and VOCs were confined to layers of silt or clay that were typically surrounded above and below by nondetectable concentrations of these compounds. These results indicate that the vapor extraction-based remediation has been successful at removing these chemicals from the permeable sediments, leaving only residual quantities of petroleum hydrocarbons and VOCs in the less-permeable silts and clays.

4.2.2 Groundwater Monitoring

A round of groundwater monitoring was conducted on November 25, 1997, for the eight Mathews site vicinity wells (MW-1 through MW-8; Figure 3). Depth to groundwater was measured and samples were collected for analysis of TVPH, TEPH, and VOCs.

Current and historical groundwater elevation data are presented in Table 2. Groundwater elevations were plotted to evaluate the horizontal groundwater flow direction beneath the Mathews site vicinity (Figure 3).

Current and historical groundwater concentrations are presented in Table 3. Groundwater analytical results indicate that the lateral extent of TVPH-affected groundwater appears to have decreased from previous rounds of groundwater monitoring.

VOC analyses identified only low concentrations of petroleum hydrocarbons such as toluene, ethylbenzene, naphthalene, and other alkylbenzenes (1,3,5-trimethylbenzene, sec-butylbenzene, etc.). Concentrations of these compounds are below their respective Maximum Contaminant Levels (MCLs) or EPA Region IX preliminary remediation goals (PRGs) for tap water.

4.3 Conclusions about Postremediation Environmental Conditions

4.3.1 Postremediation Soil Conditions

The results of the recent confirmation soil sampling described above, as well as the progress soil sampling conducted in September 1995 and May 1996 (described in previous quarterly status reports), indicate that the majority of soils at the site contain levels of VOCs and petroleum hydrocarbons that are below cleanup levels established by the RWQCB. Results of the soil sampling show significant reductions in VOC and hydrocarbon concentrations compared to the preremediation soil sampling results presented in previous reports.

The remedial monitoring and confirmation sampling results indicate the following:

- After 2.5 years of vapor extraction operation, a significant quantity of VOCs and hydrocarbons has been removed, and VOC concentrations in the vapor extraction system influent vapor have been reduced significantly.
- Significant reductions in soil concentrations have been achieved across the site.

The soils with VOC and petroleum hydrocarbon concentrations that remain above the suggested cleanup levels tend to be present in localized areas of low-permeability soils that are less amenable to remediation by vapor extraction, but pose less of a threat to groundwater through leaching processes. The conditions for natural biodegradation in areas that still contain residual amounts of VOCs and petroleum hydrocarbons have improved because vapor extraction has elevated oxygen levels in the soils.

Further, the historically stable condition of hydrocarbon concentrations in downgradient groundwater wells indicate that the residual levels of VOCs and hydrocarbons in soil at the site do not pose a significant threat to downgradient groundwater quality.

4.3.2 Postremediation Groundwater Conditions

The results of groundwater monitoring conducted since 1991 indicate that the groundwater beneath the site vicinity contains petroleum hydrocarbons which:

- are no longer present in a free-phase product in well MW-3.
- have not migrated in the dissolved-phase beyond approximately 250 feet downgradient from the Mathews site source area.
- are stable from a standpoint of downgradient migration, and the lateral extent of dissolved-phase petroleum hydrocarbons even appears to be contracting.
- are present at concentrations that are decreasing over time.

In addition, the groundwater does not contain halogenated VOCs or other recalcitrant chemical compounds. The extent of groundwater contamination consists primarily of biodegradable petroleum compounds present at concentrations below their respective MCLs or PRGs for tap water (Table 3).

4.4 Proposed No Further Action and Site Redevelopment

4.4.1 No Further Action Requested in Site Closure Report

A site closure report documenting these results and conclusions was prepared and submitted to the RWQCB on January 13, 1998. The report proposes that further active remediation cease and natural biodegradation processes be allowed to attenuate the residual levels of VOCs and hydrocarbons in the soil and groundwater at the site. The

closure report requests a formal "no further action letter" from the RWQCB for the Mathews site vicinity.

4.4.2 Plans for Property Redevelopment

Redevelopment plans for the Lawry's California Center property, including the Mathews site, consist of the demolition of the buildings, grading, and construction of buildings and parking lots. Grading at the Mathews site will consist of excavating the top 5 feet of soil. This soil will be managed according to the methodology specified in the Work Plan for Investigation and Remediation during the Redevelopment of the Lawry's California Center (October 20, 1997), which was reviewed and approved by the RWQCB on December 31, 1997. Current plans call for the Mathews area to be graded and surfaced for use as a parking lot.

5.0 CHROMAL SITE

Remedial alternative evaluations are currently being conducted. Alternatives being evaluated include:

- excavation
- in situ soil flushing
- permeable reactive barriers
- pump and treat

An aquifer pump test was conducted as part of this work, in addition to the ongoing evaluation of soil flushing and iron wall bench-scale tests.

5.1 Aquifer Pumping Test Data Analysis

5.1.1 Estimation of Aquifer Parameters

The pumping test provided drawdown versus time data for the observation wells and pumping well during pumping and recovery periods. Estimates of aquifer transmissivity, storativity, and hydraulic conductivity were obtained by fitting various analytical solution curves to these data sets using Aqtesolve for Windows (HydroSOLVE, 1996), version 1.17. Aqtesolve is an industry standard computer program used to determine aquifer properties from pumping test data.

This numerical analysis yielded an aquifer transmissivity ranging from 6.6 to 17.6 ft^2/min and a storativity from 0.0006 to 0.0064. For an aquifer thickness of 50 feet, the corresponding hydraulic conductivity ranges from 191 to 508 ft/day. Of the various

analytical solutions used to fit the field test data, the Hantush solution appeared to provide the best fit, with an average transmissivity of 9.42 ft^2/min and a corresponding average hydraulic conductivity of 271 ft/day. A summary of these results is provided in Table 4.

5.1.2 Groundwater Velocity Estimation

The average linear groundwater velocity is a function of the aquifer hydraulic conductivity, hydraulic gradient, and porosity. It is calculated using the following equation:

$$\text{Groundwater velocity} = \frac{Ki}{n}$$

K = hydraulic conductivity (ft/day)
I = hydraulic gradient (ft/ft)
n = aquifer porosity (void volume/total volume; unitless)

Recent water level measurements indicate that the gradient beneath the site is approximately 0.0013 ft/ft. The groundwater velocity ranges from 0.7 to 2.2 ft/day for the range of hydraulic conductivities estimated from the pumping test and for a porosity ranging from 0.3 to 0.35. For the average hydraulic conductivity derived using the Hantush solution (which provided the best fit of the pumping test data), the groundwater velocity ranges from 1 to 1.2 ft/day.

5.1.3 Application of Pumping Test Results to a Pump-and-Treat System Design

Groundwater extraction simulations were performed to evaluate the necessary pump-and-treat design criteria. It appears that a total pumping rate of 30 to 45 gallons per minute and two to three extraction wells would be required for the capture of the chromium-affected groundwater located beneath the Chromal site.

5.2 Remedial Design Criteria

The extent of chromium-affected soil and groundwater in the Chromal site vicinity is shown in Figure 4. The extent of chromium-affected soils appears to be located on site in an area of 7,000 to 8,000 square feet. Chromium-affected groundwater appears to extend off site for a distance of only 250 feet.

Over the last four years, it appears that the chromium concentrations in groundwater have been relatively stable. Also, the size of the chromium plume, extending only 250 feet downgradient from the site, is relatively limited. This suggests that natural attenuation processes are preventing extensive downgradient migration of chromium in the groundwater.

For instance, hexavalent chromium would have traveled 2,000 to 4,000 feet in 20 years at a groundwater velocity of 1.1 ft/day (assuming an adsorption-only retardation factor ranging from 2 to 4 for hexavalent chromium). As previously stated, the plume extends only 250 feet downgradient from the source area. The Chromal Plating Company was in operation until approximately 1960, providing at least 37 years for the hexavalent chromium to migrate to the groundwater table and then downgradient from the site. If natural attenuation processes were not present, the plume would be much longer.

The stable nature of the chromium plume indicates that groundwater remediation can be confined to on-site conditions, allowing off-site groundwater to be remediated by naturally occurring physiochemical processes. Leachable chromium-affected soils located on site pose a threat of leaching chromium into the groundwater or potentially exceeding the existing capacity of natural reduction processes located downgradient from the site. Therefore, the remedial design will be prepared to address on-site soil and groundwater conditions.

5.3 Laboratory Studies of Potential In Situ Remedial Solutions

5.3.1 Iron Wall Bench-Scale Testing

Preliminary iron wall bench-scale results indicate that an iron wall would be effective at removing hexavalent chromium from groundwater and degrading VOCs that pass through the wall. However, the iron wall has a finite lifetime for the treatment of chromium-affected groundwater. The thickness of the iron wall required to treat groundwater for a period of 10 to 20 years may be impractical from a cost and installation perspective. Ongoing testing is being performed to estimate more accurately the necessary wall thickness. This evaluation is important since a large wall thickness may make this remedial solution infeasible.

5.3.2 Soil Flushing Bench Testing

The bench-scale testing of soil flushing consisted of four primary activities:

- dual column, freshwater flushing of silty soils containing high chromium concentrations
- dual column, freshwater flushing of sandy soils containing moderate chromium concentrations
- batch testing of the effectiveness of a reducing agent (ferrous ammonium sulfate) to stabilize soils containing hexavalent chromium (i.e., convert hexavalent chromium to the nonleachable form of trivalent chromium)
- introduction of this reducing solution to the test columns to further decrease or eliminate residual levels of chromium being flushed from the column soils

Flushing of the high chromium concentration, silty soils resulted in a leachate containing approximately 100 milligrams per liter (mg/l) of hexavalent chromium, while flushing of moderate chromium concentration, sandy soils resulted in a leachate containing approximately 20 mg/l. In both cases, leachate concentrations decreased by two orders of magnitude after approximately 10 pore volumes of freshwater flushing.

Batch testing of ferrous ammonium sulfate appeared effective. Soil samples treated with the reducing solution did not leach hexavalent chromium above the detection limit of 0.01 mg/l. However, several problems were encountered with the application of the reducing solution to the column tests. Preparation of large amounts of this solution, pH control, and plugging of the column represent issues requiring further investigation prior to the recommendation of this enhancement to the soil flushing alternative.

The results of the soil flushing bench-scale test appear to support the effectiveness of using soil flushing to reduce the high concentrations of hexavalent chromium in deep soils. Such a remedial scenario would necessitate the treatment of the flushed chromium by either a pump-and-treat system or iron wall barrier.

A detailed report of the soil flushing laboratory study will be submitted to the RWQCB if this approach is selected for application at the site.

5.4 Proposed Work

Field and laboratory testing of soil and groundwater remediation technologies will continue in the first quarter of 1998. The results of field and laboratory treatability studies will be used to prepare a conceptual design for the most effective remedial alternative for the Chromal site soil and groundwater. It is anticipated that these results will be presented to the RWQCB for review in March 1998.

TABLES

Table 1:
Confirmation Borings: Soil Analytical Results - December 1, 1997
Mathews Site
Lawry's California Center
LFR 3077.00

Results reported in milligrams per kilogram (mg/kg)

Boring	Depth (feet)	Soil Type	EPA Method 8015 (modified)		EPA Method 8260											
			TVPH (C4-C12)	TEPH (C8-C44)	acetone	MEK	MIBK	nap	1,2,4-TMB	1,3,5-TMB	sec-BB	n-BB	n-PB	isoPB	4-isoPT	xylenes
CB-1	4.5	silty sand (SM)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	9.5	silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	14.5	silt (ML)	**0.1**	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	19.5	silt (ML)	**1,100**	**1,100**	<2.5	<2.5	<2.5	**9.9**	**14**	**3.1**	<1.25	**11**	<1.25	<1.25	**3.6**	<3.75
	24.5	silt (ML)	**0.43**	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	29.5	sand (SW)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	34.5	silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	39.5	sand (SW)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
CB-2	4.5	silty sand (SM)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	9.5	silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	14.5	sandy silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	19.5	silty clay (CH)	<0.1	<10	**0.037**	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	24.5	silty clay (CH)	**9.0**	**250**	<0.05	<0.05	<0.05	**0.14**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.075
	29.5	sand (SW)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	34.5	clayey silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	39.5	sand (SW)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
CB-3	4.5	clayey silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	9.5	silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	15	clayey silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	19.5	sand (SP)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	25	clay (CH)	**59**	<10	<0.5	<0.5	<0.5	<0.25	**0.36**	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.75
	29.5	sand (SW)	**0.35**	<10	**0.019**	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	34.5	sand (SW)	<0.1	<10	**0.057**	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	39.5	clayey silt (ML)	**130**	<10	<2.5	<2.5	**32**	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<3.75

Table 1:
Confirmation Borings: Soil Analytical Results - December 1, 1997
Mathews Site
Lawry's California Center
LFR 3077.00

Results reported in milligrams per kilogram (mg/kg)

Boring	Depth	Soil Type	EPA Method 8015 (modified)		EPA Method 8260											
	(feet)		TVPH (C4-C12)	TEPH (C8-C44)	acetone	MEK	MIBK	nap	1,2,4-TMB	1,3,5-TMB	sec-BB	n-BB	n-PB	isoPB	4-isoPT	xylenes
CB-4	4.5	sand (SW)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	9.5	silt (ML)	**7.1**	<10	<0.01	<0.01	<0.01	**0.014**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	14.5	silt (ML)	**3,000**	**4,100**	<10	<10	<10	**16**	**45**	**15**	<5.0	<5.0	<5.0	<5.0	<5.0	<15
	19.5	silt (ML)	**11**	<10	**1.5**	<0.05	<0.05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.075
	24.5	silty sand (SM)	**0.94**	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	29.5	silt (ML)	**0.2**	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	34.5	sand (SW)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	39.5	sand (SW)	<0.1	<10	<0.01	<0.01	**0.17**	<0.005	**0.15**	**0.031**	<0.005	<0.005	**0.011**	<0.005	<0.005	**0.025**
CB-5	4.5	silty sand (SM)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	9.5	silt (ML)	**0.89**	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	14.5	silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	20	silt (ML)	<0.1	<10	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	25	silt (ML)	**3,400**	**3,800**	<25	<25	<25	<12.5	**120**	**37**	<12.5	<12.5	<12.5	<12.5	<12.5	<37.5
	29.5	sand (SP)	**1,500**	**2,200**	<10	<10	<10	<5.0	**5.6**	**12**	<5.0	<5.0	<5.0	<5.0	<5.0	<15
	34.5	sand (SW)	**0.85**	<10	**0.027**	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015
	39.5	sand (SW)	<0.1	<10	<0.01	<0.01	**0.15**	<0.005	**0.12**	**0.027**	<0.005	<0.005	**0.0069**	<0.005	<0.005	**0.022**

NOTES:

* - designates result of laboratory analysis performed one day after holding time
< - designates less than laboratory detection limit
TVPH - Total volatile petroleum hydrocarbons, approximate carbon range: C4-C12
TEPH - Total extractable petroleum hydrocarbons, approximate carbon range: C8-C44
MEK - 2-butanone (methyl ethyl ketone)
MIBK - 4-methyl-2-pentanone (methyl isobutyl ketone)
nap - naphthalene
1,2,4-TMB - 1,2,4-trimethylbenzene
1,3,5-TMB - 1,3,5-trimethylbenzene
n- BB - n-butylbenzene
sec-BB - sec-butylbenzene
n-PB - n-propylbenzene
isoPB - isopropylbenzene
4-isoPT - 4-isopropyltoluene
xylenes - o,m,p forms of xylene

QA/QC: SJO tn LIS

Table 2:
Groundwater Elevation Measurements
Mathews Site Vicinity
Lawry's California Center
LFR 3077.00

Well Number ID	Date Measured	Top-of-Casing Elevation (feet MSL)	Depth to Groundwater (feet BTC)	Groundwater Elevation (feet MSL)	Relative Change in Groundwater Elevation (feet REL)	Depth to Product (feet BTC)	Product Thickness (feet)	Relative Change in Product Thickness (feet REL)
MW-1	10/28/91	342.44	44.50	297.94	--	--	--	--
	01/30/92		44.70	297.74	-0.20	--	--	--
	02/19/92		44.29	298.15	0.41	--	--	--
	07/06/92		43.20	299.24	1.09	--	--	--
	12/11/92		43.60	298.84	-0.40	--	--	--
	01/27/93		43.09	299.35	0.51	--	--	--
	10/29/93		42.20	300.24	0.89	--	--	--
	11/12/93		42.30	300.14	-0.10	--	--	--
	04/14/94		43.55	298.89	-1.25	--	--	--
	01/06/95		43.60	298.84	-0.05	--	--	--
	05/21/96		43.48	298.96	0.12	--	--	--
	10/08/96		43.75	298.69	-0.27	--	--	--
	06/24/97		43.52	298.92	0.23	--	--	--
	11/25/97		43.87	298.57	-0.35	--	--	--
MW-2	10/28/91	341.45	44.13	297.32	--	--	--	--
	01/30/92		44.31	297.14	-0.18	--	--	--
	02/19/92		43.99	297.46	0.32	--	--	--
	07/06/92		42.64	298.81	1.35	--	--	--
	12/11/92		43.16	298.29	-0.52	--	--	--
	01/27/93		42.68	298.77	0.48	--	--	--
	10/29/93		41.74	299.71	0.94	--	--	--
	11/12/93		41.86	299.59	-0.12	--	--	--
	04/14/94		43.15	298.30	-1.29	--	--	--
	01/06/95		43.57	297.88	-0.42	--	--	--
	05/21/96		42.94	298.51	0.63	--	--	--
	10/08/96		43.24	298.21	-0.30	--	--	--
	06/24/97		43.01	298.44	0.23	--	--	--
	11/25/97		43.43	298.02	-0.42	--	--	--
MW-3	10/28/91	343.96	47.21	296.75	--	--	--	--
	01/30/92		47.64	296.32	-0.43	--	--	--
	02/19/92		48.74	295.22	-1.10	--	--	--
	04/14/92		NA	--	--	--	--	--
	07/06/92		45.99	298.27*	--	45.62	0.37	--
	12/11/92		46.77	297.38*	-0.87	46.53	0.24	-0.13
	01/27/93		45.93	298.25*	0.87	45.65	0.28	0.04
	10/29/93		44.93	299.07*	0.86	44.88	0.05	-0.23
	11/12/93		45.09	298.91*	-0.30	44.98	0.11	0.06
	01/06/95		46.84	297.17*	-1.89	46.79	0.045	-0.065
	05/21/96		46.01	297.95	0.83	--	--	--
	10/08/96		46.23	297.73	-0.22	--	--	--
	06/24/97		46.07	297.89	0.16	--	--	--
	11/25/97		46.46	297.50	-0.39	--	--	--
MW-4	01/30/92	335.47	39.75	295.72	--	--	--	--
	02/19/92		39.20	296.27	0.55	--	--	--
	07/06/92		38.15	297.32	1.05	--	--	--
	12/11/92		38.68	296.79	-0.53	--	--	--
	01/27/93		38.09	297.38	0.59	--	--	--
	10/29/93		37.59	297.88	0.50	--	--	--

Table 2:
Groundwater Elevation Measurements
Mathews Site Vicinity
Lawry's California Center
LFR 3077.00

Well Number ID	Date Measured	Top-of-Casing Elevation (feet MSL)	Depth to Groundwater (feet BTC)	Groundwater Elevation (feet MSL)	Relative Change in Groundwater Elevation (feet REL)	Depth to Product (feet BTC)	Product Thickness (feet)	Relative Change in Product Thickness (feet REL)
MW-4	11/12/93		37.68	297.79	-0.09	--	--	--
	04/14/94		38.72	296.75	-1.04	--	--	--
	06/22/94		38.90	296.57	-0.18	--	--	--
	01/06/95		39.23	296.24	-0.33	--	--	--
	05/21/96		38.44	297.03	0.79	--	--	--
	10/08/96		38.69	296.78	-0.25	--	--	--
	06/24/97		38.49	296.98	0.20	--	--	--
	11/25/97		38.94	296.53	-0.45	--	--	--
MW-5	01/30/92	335.65	39.52	296.13	--	--	--	--
	02/19/92		39.02	296.63	0.50	--	--	--
	07/06/92		37.84	297.81	1.18	--	--	--
	12/11/92		38.40	297.25	-0.56	--	--	--
	01/27/93		37.80	297.85	0.60	--	--	--
	10/29/93		37.21	298.44	0.59	--	--	--
	11/12/93		37.30	298.35	-0.09	--	--	--
	04/14/94		38.42	297.23	-1.12	--	--	--
	01/16/95		Well Obstructed	--	--	--	--	--
	05/21/96		Well Obstructed	--	--	--	--	--
	10/08/96		Well Obstructed	--	--	--	--	--
	06/24/97		38.22	297.43	--	--	--	--
	11/25/97		38.65	297.00	-0.43	--	--	--
MW-6	01/30/92	336.38	40.14	296.24	--	--	--	--
	02/19/92		39.63	296.75	0.51	--	--	--
	07/06/92		38.46	297.92	1.17	--	--	--
	12/11/92		39.01	297.37	-0.55	--	--	--
	01/27/93		37.42	298.96	1.59	--	--	--
	10/29/93		37.80	298.58	-0.38	--	--	--
	11/12/93		37.90	298.48	-0.10	--	--	--
	04/14/94		38.98	297.40	-1.08	--	--	--
	01/06/95		Well Obstructed	--	--	--	--	--
	05/21/96		Well Obstructed	--	--	--	--	--
	10/08/96		39.05	297.33	--	--	--	--
	06/24/97		38.79	297.59	0.26	--	--	--
	11/25/97		39.25	297.13	-0.46	--	--	--
MW-7	01/30/92	335.34	39.31	296.03	--	--	--	--
	02/19/92		39.36	295.98	-0.05	--	--	--
	07/06/92		38.08	297.26	1.28	--	--	--
	12/11/92		38.70	296.64	-0.62	--	--	--
	01/27/93		38.11	297.23	0.59	--	--	--
	10/29/93		37.45	297.89	0.66	--	--	--
	11/12/93		37.55	297.79	-0.10	--	--	--
	04/14/94		38.68	296.66	-1.13	--	--	--
	01/06/95		39.27	296.07	-0.59	--	--	--
	05/21/96		38.39	296.95	0.88	--	--	--
	10/08/96		38.67	296.67	-0.28	--	--	--
	06/24/97		38.44	296.90	0.23	--	--	--
	11/25/97		38.94	296.40	-0.50	--	--	--

Table 2:
Groundwater Elevation Measurements
Mathews Site Vicinity
Lawry's California Center
LFR 3077 00

Well Number ID	Date Measured	Top-of-Casing Elevation (feet MSL)	Depth to Groundwater (feet BTC)	Groundwater Elevation (feet MSL)	Relative Change in Groundwater Elevation (feet REL)	Depth to Product (feet BTC)	Product Thickness (feet)	Relative Change in Product Thickness (feet REL)
MW-8	11/12/93	336.64	37.98	298.66	--	--	--	--
	04/14/94		39.06	297.58	-1.08	--	--	--
	01/06/95		39.63	297.01	-0.57	--	--	--
	05/21/96		Well Obstructed	--	--	--	--	--
	10/08/96		39.18	297.46	--	--	--	--
	06/24/97		38.92	297.72	0.26	--	--	--
	11/25/97		39.40	297.24	-0.48	--	--	--

NOTES:

* = Corrected groundwater elevation assuming product specific gravity = 0.8
NA = Data not available.
Survey of top-of-well casing elevations provided by Calvada Surveying, and performed by a California Licensed Land Surveyor.
feet REL = Relative Elevation
feet MSL = Mean Sea Level
feet BTC = Below Top of Casing

QA/QC: SJO

Table 3:
Summary of Groundwater Analytical Data
Mathews Site Vicinity
Lawry's California Center
LFR 3077.00

All values reported in milligrams per liter (mg/L)

Monitoring Well ID	Sampling Date	CA DHS Analytical Method		Volatile Organic Compounds by EPA Method 8260										
		TEPH	TVPH	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Naphthalene	4-Methyl 2-Pentanone	n-Propyl benzene	sec-Butyl benzene	Iso propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene
MW-1	10/28/91	<10	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/21/92	NA	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/27/93	<1*	NA	<0.0020	**0.010**	<0.0020	<0.0040	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/6/95	NA	NA	<0.0020	<0.0020	<0.0020	<0.0060	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/21/96	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
	6/26/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	11/25/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	10/28/91	<10	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/21/92	NA	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/27/93	<1*	NA	<0.0020	**0.008**	<0.0020	<0.0040	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/6/95	NA	NA	<0.0020	<0.0020	<0.0020	<0.0060	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/22/96	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
	6/26/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	11/25/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	10/28/91	<10	**18.0**	<0.050	<0.050	<0.050	**0.730**	**0.190**	**10.0**	<0.050	<0.050	<0.050	**1.400**	**0.400**
	10/28/91 (D)	<0.50	**20.4**	**0.011**	**0.015**	**0.105**	**0.940**	NA	NA	NA	NA	NA	NA	NA
	1/21/92	NA	**15.0**	<0.130	<0.130	**0.160**	**0.910**	**0.250**	**9.90**	**0.210**	<0.130	**0.130**	**1.700**	**0.420**
	1/27/93	Free product present - not sampled												
	1/6/95	Free product present - not sampled												
	5/22/96	<10	**20.0**	<0.025	<0.025	**0.080**	**0.364**	**0.200**	<0.250	**0.110**	**0.037**	**0.067**	<0.025	**0.250**
	10/8/96	<10	**3.5**	<0.005	<0.005	**0.047**	**0.055**	<0.005	<0.063	**0.076**	**0.022**	**0.034**	**0.013**	**0.034**
	6/26/97	<10	**6.5**	<0.013	<0.013	**0.046**	**0.014**	**0.098**	<0.063	**0.070**	**0.035**	**0.042**	<0.013	**0.052**
	11/25/97	<10	**6.0**	<0.005	<0.005	**0.042**	<0.015	**0.030**	<0.05	**0.073**	**0.026**	**0.037**	<0.005	**0.0075**
MW-4	1/13/92	NA	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/21/92	NA	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/28/93	<1*	NA	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/6/95	NA	NA	<0.0020	<0.0020	<0.0020	<0.0060	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/22/96	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
	6/26/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	11/25/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	**0.0019**	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
MW-5	1/21/92	NA	**0.13**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	**0.007**	**0.021**	<0.0050
	1/21/92 (D)	NA	**0.24**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	**0.006**	**0.022**	<0.0050
	1/28/93	<1*	NA	<0.0020	**0.0030**	<0.0020	<0.0040	**0.002**	<0.020	<0.0020	**0.002**	**0.004**	<0.0020	<0.0020
	1/28/93 (D)	<1*	NA	<0.0020	**0.0030**	<0.0020	<0.0040	**0.003**	<0.020	<0.0020	**0.003**	**0.004**	<0.0020	<0.0020
	1/6/95	Well obstructed - not sampled												
	5/21/96	Well obstructed - not sampled												
	10/8/96	Well obstructed - not sampled												
	6/26/97	<10	**1.7**	<0.01	<0.01	**0.014**	<0.03	<0.01	<0.05	**0.017**	**0.024**	**0.027**	<0.01	<0.01
	11/25/97	<10	**0.33**	<0.001	<0.001	**0.0043**	<0.003	**0.0049**	<0.01	**0.0058**	**0.0062**	**0.011**	<0.001	<0.001

Table 3:
Summary of Groundwater Analytical Data
Mathews Site Vicinity
Lawry's California Center
LFR 3077.00

All values reported in milligrams per liter (mg/L)

Monitoring Well ID	Sampling Date	CA DHS Analytical Method		Volatile Organic Compounds by EPA Method 8260										
		TEPH	TVPH	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Naphthalene	4-Methyl 2-Pentanone	n-Propyl benzene	sec-Butyl benzene	Iso propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene
MW-6	1/21/92	NA	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/27/93	<1*	NA	<0.0020	**0.0020**	<0.0020	<0.0040	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/6/95	Well obstructed - not sampled												
	5/21/96	Well obstructed - not sampled												
	10/8/96	<10	<0.100	<0.001	<0.001	<0.002	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	6/26/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.005	<0.001	**0.0034**	**0.0022**	<0.001	<0.001
	11/25/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
MW-7	1/21/92	NA	**0.32**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/30/92	NA	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1/28/93	<1*	NA	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.020	<0.0020	**0.008**	**0.004**	<0.0020	<0.0020
	1/6/95	NA	NA	<0.0020	<0.0020	<0.0020	<0.0060	<0.0020	<0.020	<0.0020	**0.030**	**0.01**	<0.0020	<0.0020
	5/22/96	<10	**0.280**	<0.001	<0.001	<0.001	<0.003	<0.001	<0.01	<0.001	**0.026**	**0.015**	<0.001	<0.001
	6/26/97	<10	**0.140**	<0.005	<0.005	<0.005	<0.015	<0.005	<0.025	<0.005	**0.011**	**0.0078**	<0.005	<0.005
	11/25/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.01	<0.001	**0.0056**	**0.0022**	<0.001	<0.001
MW-8	1/6/95	NA	NA	<0.0020	**0.031**	<0.0020	<0.0060	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/21/96	Well obstructed - not sampled												
	10/8/96	<10	<0.100	<0.001	<0.001	<0.001	<0.002	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	6/26/97	<10	<0.100	<0.001	<0.001	<0.001	<0.003	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	11/25/97	<10	<0.100	<0.001	**0.0013**	<0.001	<0.003	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
MCLs		NE	NE	0.001	0.15	0.7	1.750	0.240**	2.9**	NE	NE	NE	NE	NE

NOTES:

< - designates less than laboratory detection limit
* - Total extractable petroleum hydrocarbon analysis with carbon chain distinction (C8 - C44+); Detection Limit is 1.0 mg/L for carbon lengths C8-C9, C10-C11, etc.
** - EPA Region IX Preliminary Remediation Goals for tap water
NA - Not Analyzed
MCLs - Maximum Contaminant Level (MCL) or Primary Drinking Water Standards for the State of California
NE - Not Established
(D) - Duplicate sample analyzed
TEPH - Total extractable petroleum hydrocarbons
TVPH - Total volatile petroleum hydrocarbons

QA/QC: SJO fm AXI

TABLE 4:

Summary of Aquifer Test Data and Analysis

Lawry's California Center: Chromal Plating Site

LFR 6257.00

Well Number	Static Water Level (feet TOC)	Radius from Pumping Well (feet)	Data Type	Avg. Pumping Rate (gpm)	Obs. Max. Displacement (feet water)	Analysis Method	Transmissivity T (ft^2/min)	Storativity S	Storativity S'	Hydraulic Conductivity (ft/min)	Hydraulic Conductivity (ft/day)
LFCH-1	40.85	0	Drawdown	48	5.249	-					
(Test Well)			Recovery	0		Theis Recovery	17.64		1.0	0 35	508
LFCH-9	41.05	20	Drawdown		0 347	Theis	6 64	0 0039		0 13	191
(observation well)						Cooper-Jacobs	17 37	0.0006		0.35	500
						Hantush	8.91	0 0064		0 18	257
			Drawdown & Recovery			Theis	14 35	0 0031		0 29	413
						Cooper-Jacobs	16.9	0 0007		0.34	487
						Hantush	8 93	0 0064		0 18	257
			Recovery			Theis Recovery	15.82		1.0	0 32	456
LFCH-10A	39.91	30	Drawdown		0 030	Theis	14 13	0.0031		0 28	407
(observation well)						Cooper-Jacobs	15.59	0 0023		0 31	449
						Hantush	9 91	0 0040		0 20	285
			Drawdown & Recovery			Theis	14 25	0 0034		0 29	410
						Cooper-Jacobs	15 68	0 0021		0 31	452
						Hantush	9.94	0.0041		0 20	286
			Recovery			Theis Recovery	15.7		1.0	0.31	452
Average All Values							**13.15**	**0.0033**		0 26	379
Average "Best Fit" Hantush Values							**9.42**	**0.0052**		0.19	271 37

Notes:

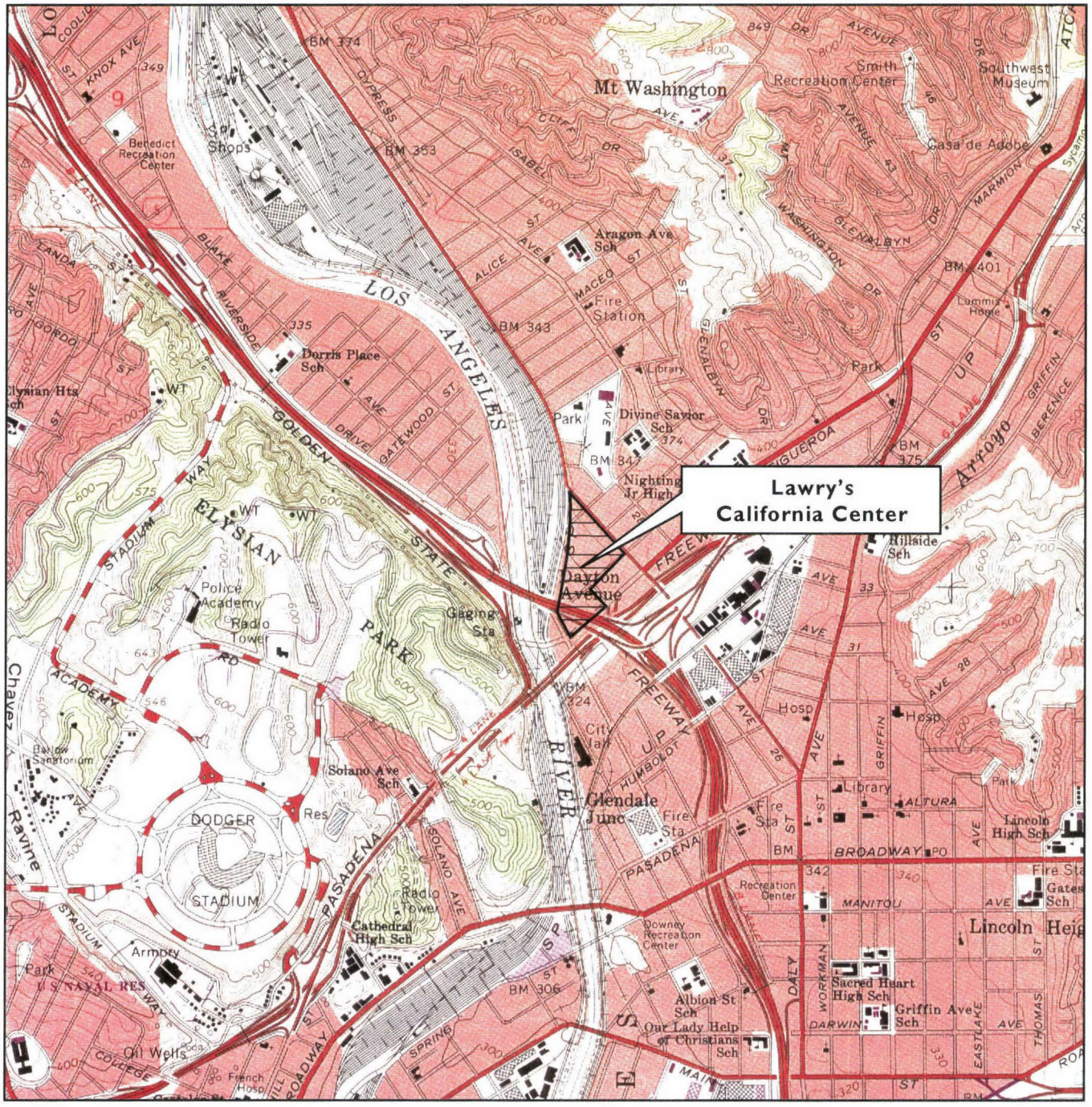
Feet TOC = feet below top of casing
gpm = gallons per minute
ft^2/min = feet squared per minute
S = Storage coefficent of aquifer (dimensionless)
S' = ratio of storage during pumping to storage during recovery (dimensionless)
ft/min = feet per minute

Theis Recovery = Theis recovery method, Kruseman and DeRidder (1990)
Theis = Theis anaylsis method, Theis (1935)
Cooper-Jacob = Copper-Jacob straight line analysis method, Copper & Jacob (1946)
Hantush = Hantush (1960) Solution method for leaky aquifers with storage in aquitards

Best Fit = Best type curve match is observed with Hantush (1960) leaky aquifer solution with storage in aquitards

SJO for EMN
QA/QC

FIGURES



MAP SOURCE: U.S.G.S Topographic Map, 7.5' Quadrangle, Los Angeles, California, 1981.

Site Vicinity

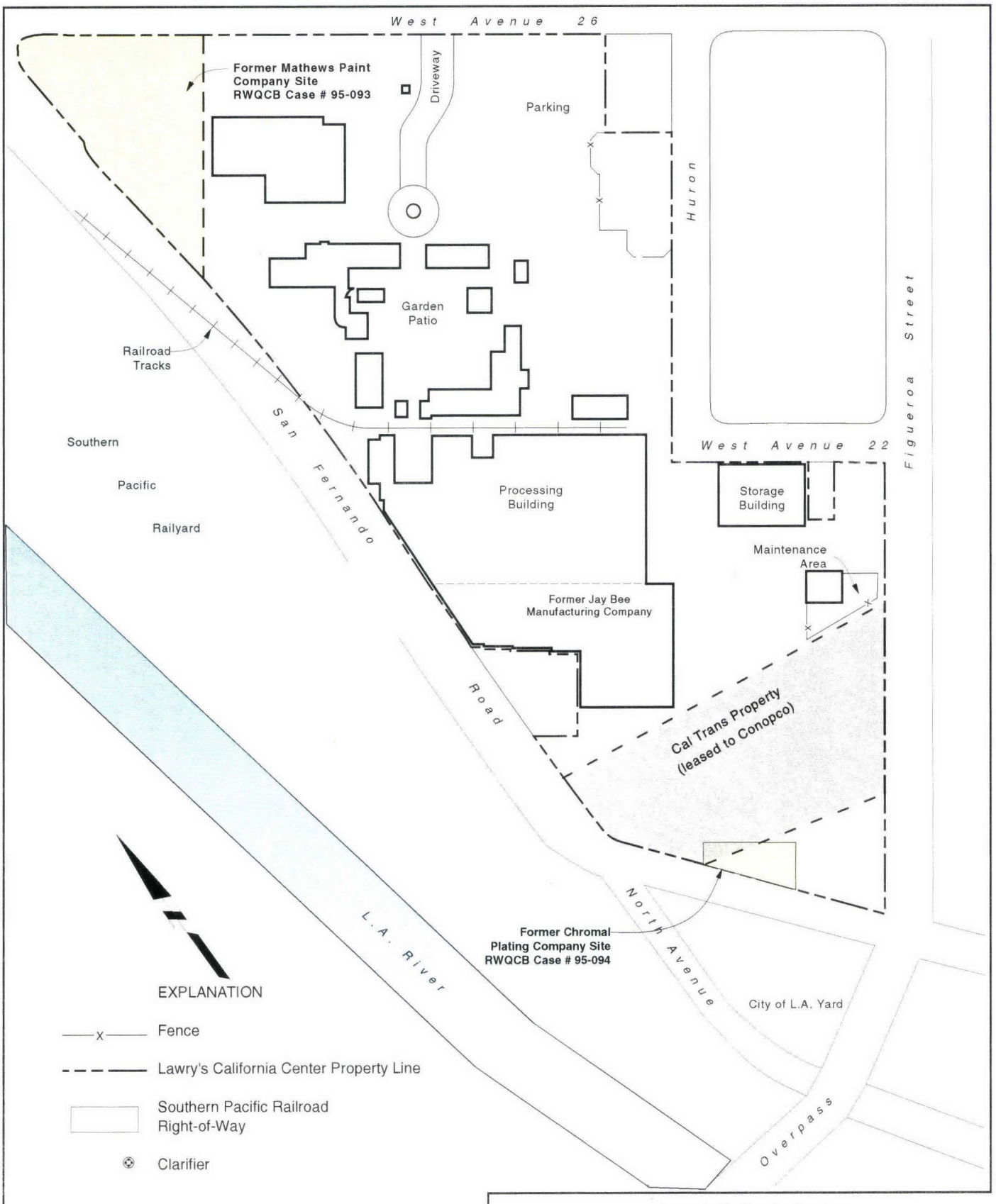
Levine-Fricke-Recon

Project No. 2377

Lawry's

Figure 1

2377-168 _ 111896SJO/scj



Caltrans Property Location based upon map by A.L.T.A. Survey, April 13, 1992.
Former Chromal Plating Company location based upon 1950 Sanborn Fire Insurance Map.
Base map provided by Lawry's Foods, Inc.

Lawry's California Center

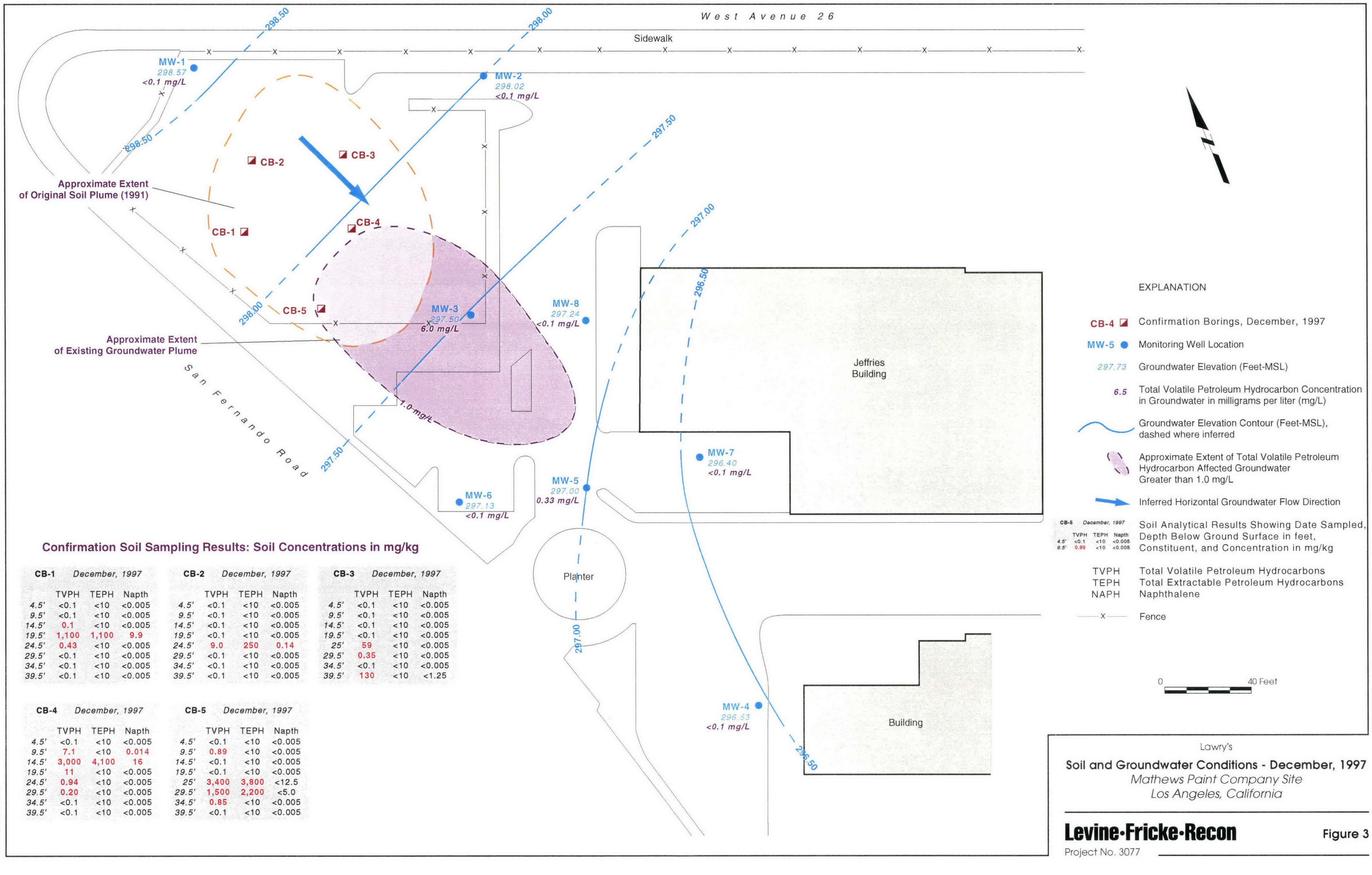
Site Plan

Levine·Fricke·Recon

Project No. 3077

Figure 2

3077-42.fH7 _0107985JO/scj



Confirmation Soil Sampling Results: Soil Concentrations in mg/kg

CB-1 *December, 1997*

	TVPH	TEPH	Napth
4.5'	<0.1	<10	<0.005
9.5'	<0.1	<10	<0.005
14.5'	0.1	<10	<0.005
19.5'	1,100	1,100	9.9
24.5'	0.43	<10	<0.005
29.5'	<0.1	<10	<0.005
34.5'	<0.1	<10	<0.005
39.5'	<0.1	<10	<0.005

CB-2 *December, 1997*

	TVPH	TEPH	Napth
4.5'	<0.1	<10	<0.005
9.5'	<0.1	<10	<0.005
14.5'	<0.1	<10	<0.005
19.5'	<0.1	<10	<0.005
24.5'	9.0	250	0.14
29.5'	<0.1	<10	<0.005
34.5'	<0.1	<10	<0.005
39.5'	<0.1	<10	<0.005

CB-3 *December, 1997*

	TVPH	TEPH	Napth
4.5'	<0.1	<10	<0.005
9.5'	<0.1	<10	<0.005
14.5'	<0.1	<10	<0.005
19.5'	<0.1	<10	<0.005
25'	59	<10	<0.005
29.5'	0.35	<10	<0.005
34.5'	<0.1	<10	<0.005
39.5'	130	<10	<1.25

CB-4 *December, 1997*

	TVPH	TEPH	Napth
4.5'	<0.1	<10	<0.005
9.5'	7.1	<10	0.014
14.5'	3,000	4,100	16
19.5'	11	<10	<0.005
24.5'	0.94	<10	<0.005
29.5'	0.20	<10	<0.005
34.5'	<0.1	<10	<0.005
39.5'	<0.1	<10	<0.005

CB-5 *December, 1997*

	TVPH	TEPH	Napth
4.5'	<0.1	<10	<0.005
9.5'	0.89	<10	<0.005
14.5'	<0.1	<10	<0.005
19.5'	<0.1	<10	<0.005
25'	3,400	3,800	<12.5
29.5'	1,500	2,200	<5.0
34.5'	0.85	<10	<0.005
39.5'	<0.1	<10	<0.005

Lawry's

Soil and Groundwater Conditions - December, 1997

Mathews Paint Company Site
Los Angeles, California

Levine•Fricke•Recon

Project No. 3077

Figure 3

3077-43 _ 121197SJO/scl

EXPLANATION

MW-1 ● Monitoring Well Location

<0.01 Hexavalent Chromium Concentration in Groundwater in milligrams per liter (mg/L)

Approximate Extent of Hexavalent Chromium Affected Groundwater in excess of the MCL of 0.05 mg/L

Inferred Horizontal Groundwater Flow Direction

—x— Fence

MSA-2

MSA-3

Corrugated Metal Building

Freeway Support Pillar (typical)

LFCH-6 <0.01

Asphalt Paving

North Avenue 19

LFCH-5 <0.01

LFCH-10C
LFCH-10B
LFCH-10A 9.2

LFCH-1 6.4

LFCH-9 <0.01

CAL TRANS PROPERTY (Freeway Overpass)

LFCH-4 0.05

Approximate Areal Extent of Chromium-Affected Soils

City of LA Yard

Building

LFCH-2 <0.01

San Fernando Road

LFCH-3 0.46

Approximate Areal Extent of Chromium-Affected Groundwater in August 1997

Figueroa Street

LFCH-8 <0.01

LFCH-7 <0.01

0 60 Feet

SOURCE: Calvada Surveying, Inc., August 1997.

Lawry's Chromal Site

Chromal Site Vicinity Showing Soil and Groundwater Conditions

Levine-Fricke-Recon

Figure 4

Project No. 6257

6257-10_111797SJO/meg


Levine·Fricke·Recon
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS